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RESEARCH ARTICLE.....

Feeding and management practices adopted by local milch buffalo owners under field condition of Gadchiroli tahsil

V.G. ATKARE, S.M.KHUPSE AND **ROHINI DARADE**

ABSTRACT..... A field study was carried out to collect the first hand information on buffalo management practices followed by farmer in Gadchiroli Tahsil of Gadchiroli Dist. during the year 2015–16 under Sanctioned project by the Ministry of Science and Technology, Department of Biotechnology, New Delhi entitled as "Hope generation in livestock owners of tribal area under two blocks of Gadchiroli district through training and demonstration of scientific livestock management practices" to the Section of Animal Husbandry and Dairy Science, College of Agriculture, Nagpur. Existing Feeding and management practices were studied through predesigned and pretested questionnaire from 200 buffalo owners. The results revealed that the scientific feeding practices were not adopted by majority of the (more than 76.50%) buffalo owners. The wide scope of improvement in the adoption of scientific feeding practices by educating them properly. Majority of buffalo owners adopted open shed (91.50%), kaccha (94.50%), part of residence (92.00%). Adoption of Health Sanitation programme was satisfactory. In breeding management programme needs to improve awareness in respect of artificial insemination.

KEY WORDS..... Scientific feeding practices, Housing pattern, Health and sanitation, Breeding method

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INTRODUCTION.....

Buffaloes have unique position in Indian dairying as they are considered as bearer cheque of the rural flock. It contributes 57 per cent in total milk production (Misra *et al*., 1998). The preference of buffaloes may be on account of higher productivity and higher price realization relative to cow milk owing to higher fat content of milk. Moreover buffaloes are known to better converters of poor quality roughage into milk. In spite of this there is regular genetic drain of the buffaloes with superior germplasm. However, the present status of buffalo rearing does not appear encouraging. The buffaloes owned by small, marginal farmers and landless labours are reared under the backyard system where one to three animals are kept for milk. The animals are fed on crop residues available in the form of wheat, paddy or sorghum straws and supplemented with grazing, crop residues, by-products and concentrates. Very little

attention is given to balance feeding. It seems therefore essential to form a package of practices for total management where full potential of buffalo could be exploited for milk (Mudgal, 1988). Apart from the quantitative shortage of feeds and fodders, there is deficiency of nutrient supply to the animals which may be the major cause of low production. The results of the survey conducted in Vidarbha region of Maharashtra did indicate that the bovine population received 28 to 30 per cent less DCP than requirement (Anonymous, 2001).

Keeping these in view, an attempt was made to study the adoption of feeding and management practices by buffalo owners under field conditions of Gadchiroli Tahsil, Dist. Gadchiroli (M.S.).

RESEARCH METHODS.....

The study was carried out in Gadchiroli tahsil of Gadchiroli district during the year 2015-16 under sanctioned project by the Ministry of Science and Technology, Department of Biotechnology entitled as "Hope generation in livestock owners of tribal area under two blocks of Gadchiroli district through training and demonstration of scientific livestock Management practices" to the Section of Animal Husbandry and Dairy Science College of Agriculture, Nagpur. Five villages from Gadchiroli tahsil namely, Kaneri, Kharpundi, Wakadi, Wasa and Pulkhal were randomly selected. The list of buffalo owners was prepared for each village with the help of Gramsevak and Livestock Development officers of Gadchiroli Panchayat Samiti. These Buffalo owners were contacted from each village and accordingly total buffalo owners contacted were 200 *i.e*. 40 buffalo owners from each village contacted from Gadchiroli block of Gadchiroli distt. The information on feeding and management practices was obtained from the selected buffalo owners through personal interaction with the help of questionnaire from the villages selected for the study.

The data with regards to various aspects of study such as recommended feeding practices *viz.*, feeding of balanced ration, feeding of roughages and concentrates in required quantity, processing of roughages, enrichment of poor quality roughages with urea and molasses.Rate of feeding of various feeding components (green, dry, concentrates and mineral mixture) and data on housing pattern, health and sanitation and breeding aspect were also collected. These data were tabulated carefully while compiling the information. To study the recommended feeding practices aspect the data were further categorized on the basis of size of herd of buffalo owners in the following groups.

1) 1 – 3 Buffaloes
2) 4 – 6 Buffaloes
3) 7–10 Buffaloes
4) Above 10 Buffaloes

The data so collected in respect of above parameters were tabulated and subjected to statistical evaluation by adopting the standard technique prescribed by Snedecor and Chochran (1967).

RESEARCH FINDINGS AND ANALYSIS.....

The results obtained from the present investigation as well as relevant discussion have been summarized under the following heads :

Adoption of scientific feeding practices :

Adoptions of scientific recommendations in feeding of milch buffaloes in Gadchiroli tahsil are presented in Table 1.

It is revealed from Table 1, that among the scientific feeding practices, majority of the buffalo owners from all categories did not adopt most of the feeding practices such as feeding of balanced ration at regular interval (20.50 %), enrichment of poor quality roughages by urea, ammonization and molasses(1.50 %), feeding at least 3-5 kg green fodder (20.00 %), feeding of conc. @ 50 per cent of milk production (34.50 %), use of 60 g common salt (26.50 %), mineral mixture (6.00 %) and mineral bricks (nil) and feeding concentrate mixture @ 1 to 1.5 kg. to pregnant buffalo (22.50 %).

The adoption of chaffing of roughages, crushing of grains, processing like water soaking of roughages and concentrates before feeding and feeding of minimum 3 to 5 kg. green forage and 2 to 2.5 kg. dry matter 100^{-1} kg body weight were observed in buffalo owners having herd size of 1-3 to the extent of 20.00, 13.30 and 26.60 per cent, respectively. The per cent of this processing of roughages was 26.66 per cent in the buffalo owners group of 1-3 buffaloes and feeding of dry roughages at the rate of 2 to 2.5 kg. 100^{-1} kg body weight was found the lowest in the category of buffalo owners having herd size of 1-3 buffaloes. Use of agro-industrial by product like turchunni, bran was found in 93.75 per cent of the buffalo owners having the herd size of 4-6 buffaloes followed by 58.33 per cent from the category of 7-10 herd size of buffaloes and 53.54 above 10 and 20.00 per cent from the category of 1-3 herd size of buffaloes.

Overall percentage of processing, feeding at least 3 to 5 kg green forage, feeding of dry matter @ 2 to 2.5 kg / 100 kg body weight and inclusion of agro-industrial by product were found 81.50, 26.00, 84.00 and 75.00 per cent, respectively.

Feeding of concentrate @ 50 per cent of milk production was followed by maximum *i.e.* 49.10 per cent buffalo owners of herd size of 4-6. However, it was 20 per cent minimum in the herd size of 1-3, While 16.66 and 15.38 per cent buffalo owners followed practice of concentred feeding in herd size of 7-10 and above 10 buffalo, respectively. The overall percentage of 34.50 was recorded towards the feeding of concentrates as per schedule to milch buffaloes. Except herd size of 4-6 and 7-10 buffalo neither single category of buffalo owner enriched their poor quality roughages with urea, ammoniation and molasses treatment used any type of mineral mixture to feed their buffalo owners herd size of 4-6 and 7-10 buffalo, respectively. But in all categories of buffalo owners mineral bricks were not used to feed their buffaloes. Feeding of the salt either in the form of feed mixture or in water was followed by 35.71 per cent in 4-6 category of buffalo owners whereas it was minimum in the category of 7-10 buffaloes herd size with overall average of 16.66 per cent, The feeding of pregnancy allowance to the buffalo at the rate of 1 to 1.5 kg. was adopted by 13.33, 26.78, 18.33 and 23.07 per cent buffalo owners under first, second, third and fourth category, respectively. Overall, 22.50 per cent buffalo owners adopted scientific recommendation pertaining to feeding of pregnancy allowance in entire villages of the Gadchiroli Tahsil.

It was further noticed that the buffalo owners of herd size of 4-6 buffaloes were much more interested to maintain their animal by managing various feeding practices such as feeding of dry, green and concentrate in required proportion (58.82), processing of roughages (95.53), feeding of dry matter (99.10), inclusion of industrial by product (93.75), feeding of concentrate @ 50 per cent (49.10) and pregnancy allowance (26.78) for harvesting the maximum milk yield as compared to other buffalo owners *i.e.* 7-10 and above 10 of herd size. This might be due to less number of animals, individual care could be taken by the family members of buffalo owners, while individual care of animal may not be possible in large herd size of buffaloes. Jagdale *et al.* (2000), Kawathalkar (2002) and Aulakh *et al.* (2011) observed that adoption of scientific recommendation *i.e.*

Table 1 : Adoption of scientific recommendation in feeding of milch buffalos by various size of herd buffalo owners in Gadchiroli tahsil

Sr. No.	Recommendation feeding practices	1 to 3 buffalo owners 15	Per cent	4 to 6 buffalo owners 112	Per cent	7 to 10 buffalo owners 60	Per cent	Above 10 buffalo owners 13	Per cent	Over all 200	Per cent
1.	Feeding of balanced ration at regular interval	5	26.66	22	19.64	12	20.00	3	23.07	41	20.50
2.	Feeding of dry, green and conc. in required proportion	6	33.33	65	58.03	40	66.66	4	30.76	114	57.00
3.	Processing of roughages and conc. Before feeding, chaffing/water soaking	3	20.00	107	95.53	46	76.66	7	53.84	163	81.50
4.	Enrichment of poor quality roughages by urea, ammoniation and molasses	-	-	2	1.78	1	1.66	-	-	3	1.50
5.	Feeding at least 5 kg green fodder	2	13.33	15	13.39	18	26.66	5	38.46	40	20.00
6.	Feeding of dry matter 2.5 to 3 kg 100^{-1} kg body weight	4	26.66	111	99.10	42	70.00	11	84.61	168	84.00
7.	Inclusion of agro-industrial by product like turechunni, bran etc.	3	20.00	105	93.75	35	58.33	7	53.84	150	75.00
8.	Feeding of conc. @ 50 per cent of milk production	2	13.33	55	49.10	10	16.66	2	15.38	69	34.50
9.	Use of 60 gm common salt	3	26.66	40	35.71	10	16.66	-	-	53	26.50
	Use of mineral mixture	2	13.33	4	3.57	2	3.33	-	-	8	5.50
	Use of mineral bricks	-	-	-	-	-	-	-	-	-	-
10.	Feeding of conc. Mixture @ 1 to 1.5 kg to pregnant animal	2	13.33	30	26.78	11	18.33	2	15.38	45	22.50

feeding of dairy animals were meagre.

Housing management :

Data on housing pattern used by buffalo owners are presented in Table 2.

It was inferred from Table 2 that, the open shed housing patterns were adopted by maximum number of buffalo owners *i.e.* 91.00 per cent. Whereas, closed shed housing pattern was used by minimum number of buffalo owners *i.e.* 9.00 per cent. The Kaccha housing pattern was adopted by 94.50 per cent buffalo owners and pacca housing was adopted by 5.50 per cent respondents. Also separate housing was adopted by 92.00 per cent buffalo owners and 8.00 per cent buffalo owners adopted by part of residence housing pattern.

The flooring of byre was kaccha for maximum buffalo owners *i.e.* 98.00 per cent and pacca flooring of house was adopted by very few buffalo owners *i.e.* 2.00 per cent. In almost all selected villages, buffalo owners adopted well ventilated housing patterns. Drainage to drain out urine was available in very few buffalo owners *i.e.* 5.00 per cent and drain for urine out was not available with maximum number of buffalo owners *i.e.* 95.00 per cent.

Bainwad *et al.* (2007) observed that Kaccha flooring was adopted by 92 per cent buffalo owners. They further noticed that due to absence of pucca floor and urine drain out facilities not available to maximum number of buffalo owners (90.5 %). The present finding also do not show any significant improvement in adoption of pacca flooring.

Health, sanitation and breeding method management :

It is evident from Table 3 that, cleaning of milking utensils was done in the selected villages *i.e.* 100 per

Table 2 : Housing pattern adopted by selected buffaloowners **(n=200)**

Sr. No.	Component	Kaneri	Kharpundi	Wakadi	Wasa	Pulkhal	Overall	Per cent
1.	Open shed	38	36	37	36	35	182	91.00
	Closed sheed	02	04	03	04	05	18	09.00
2.	Kaccha shed	38	36	38	38	39	189	94.5
	Pacca shed	02	04	02	02	01	11	5.50
3.	Separate shed	37	38	38	35	36	184	92.00
	Part of residence	03	02	02	05	04	16	08.00
4.	Kaccha floring	39	40	38	39	40	194	98.00
	Pacca floring	01	00	02	01	00	06	02.00
5.	Ventilated	40	40	40	40	40	200	100
	Non-venrilatd	-	-	-	-	-	-	-
6.	Paccadarin for urine to drain out is	4	3	-	2	1	10	5.00
	available darin for urine not available	36	37	40	38	39	190	95.00

Table 3 : Health and sanitation adopted by buffalo owners **(n=200)**

Sr. No.	Component	Name of selected villages					Overall	Per cent
		Kaneri	Kharpundi	Wakadi	Wasa	Pulkhal		
1.	**Cleaning**							
	Cleaning of milking utensils	40	40	40	40	40	200	100
	Cleaning of shed not practices	40	40	40	40	40	200	100
	Washing of udder before milking	40	40	40	40	40	200	100
2.	**Health**							
	Removal of hairs regularly	39	38	37	38	39	191	95.50
	Not regular	1	2	3	2	1	09	4.50
	Wallowing of buffalo	40	40	40	40	40	200	100
	Vaccination	38	38	37	39	38	190	95.00
3.	**Breeding methods**							
	Natural service	36	35	36	35	37	179	89.50
	Artificial insemination	4	5	4	5	3	21	10.50

cent. The cleaning of shed was done by all the selected buffalo owners. Also all selected buffalo owners were practicing washing of udder before milking *i.e.* 100 per cent. The removal of hairs was done by 191 buffalo owners *i.e.* 95.50 per cent and removal of hairs not regularly done by 4.50 per cent buffalo owners. Wallowing of buffalo was done in selected villages *i.e.* 100 per cent and Vaccination was done by 190 buffalo owners *i.e.* 95.00 per cent.

Bashir and Kumar (2013) observed that the cent per cent farmers were regularly using the practices like cleaning of utensils and washing of udder before milking. The results of the present study are almost in line with these results

Breeding management :

Out of 200 buffaloes, 89.50 per cent buffalo owners adopted natural service to their buffaloes by using healthy local male of buffalo. About 10.50 per cent buffalo owners adopted Artificial Insemination method. The results of present study are in line with the findings of Jagdale *et. al*. (2000). They also noticed that washing of buffalo was adopted by (100 %) buffalo owners. With regards to adoption of breeding methods Bainwad *et al*. (2007) reported that due to availability local buffalo breeding bull, all buffalo owners used natural service method of breeding and were also well aware about adoption of vaccination (95.00 %).

Conclusion :

The results revealed from this study, the scientific feeding practices were not adopted by majority of the (more than 76.50%) buffalo owners. The wide scope of improvement in the adoption of scientific feeding practices by educating them properly. Majority of buffalo owners adopted open shed (91.50%), kaccha (94.50%), part of residence (92.00%). Adoption of Health Sanitation programme was satisfactory. In breeding management programmed needs to improve awareness in respect of artificial insemination.

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